

WHAT IS CLAIMED IS:

1. A particle having an interior region and a surface region, a weight percent of a first polymer in the interior region being less than a weight percent of the first polymer at the surface region, the particle having a diameter of from about ten microns to about 3,000 microns.

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2. The particle of claim 1, wherein the interior region is substantially devoid of the first polymer.

10 3. The particle of claim 1, wherein the interior region comprises at most about 50 weight percent of the first polymer.

4. The particle of claim 3, wherein the particle comprises from about 0.1 weight percent to about 90 weight percent of the first polymer.

15 5. The particle of claim 1, wherein the interior region comprises at least about 0.1 weight percent of the first polymer.

6. The particle of claim 1, wherein the surface region comprises at least about 0.1 weight percent of the first polymer.

20 7. The particle of claim 6, wherein the particle comprises from about 0.1 weight percent to about 90 weight percent of the first polymer.

25 8. The particle of claim 1, wherein the surface region comprises at most about 100 weight percent of the first polymer.

9. The particle of claim 1, wherein the difference between the weight percent of the first polymer in the interior region and the weight percent of the first polymer at the surface region is at least about 30 weight percent.

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10. The particle of claim 1, wherein the particle has a diameter of at least about 100 microns.

5 11. The particle of claim 1, wherein the particle has a diameter of at most about 2,500 microns.

12. The particle of claim 1, wherein the first polymer comprises a halogenated polymer.

10 13. The particle of claim 1, wherein the first polymer comprises a fluorinated polymer.

14. The particle of claim 1, wherein the first polymer comprises a backbone and side groups that are more polar than the backbone.

15 15. The particle of claim 1, wherein the first polymer has a molecular weight of from about 500 to about 15,000.

20 16. The particle of claim 1, wherein the first polymer is substantially linear.

25 17. The particle of claim 1, wherein the first polymer has the formula D-B-[O-(A-O)_n-B]_m-D, in which O is a first oligomeric segment, B is a first coupling segment, A is a second coupling segment, D is a polyfluoro oligomeric group, m is from one to 20, and n is from zero to 20.

30 18. The particle of claim 17, wherein O comprises a member selected from the group consisting of polyurethanes, polyureas, polyamides, polyalkylene oxides, polycarbonates, polyesters, polylactones, polysilicones, polyethersulfones, polyolefins, polyvinyls, polypeptide polysaccharides, and ether and amine linked segments thereof.

19. The particle of claim 17, wherein A comprises a member selected from the group consisting of diamines, diisocyanates, disulfonic acids, dicarboxylic acids, diacid chlorides, and dialdehydes.

5 20. The particle of claim 17, wherein B comprises a member selected from the group consisting of diamines, diisocyanates, disulfonic acids, dicarboxylic acids, diacid chlorides, and dialdehydes.

10 21. The particle of claim 20, wherein B further comprises a functional group selected from the group consisting of esters, carboxylic acid salts, sulfonic acid salts, phosphonic acid salts, thiols, vinyls, and secondary amines.

15 22. The particle of claim 17, wherein D comprises $\text{CF}_3(\text{CF}_2)_p\text{CH}_2\text{CH}_2-$, wherein p is from two to 20.

23. The particle of claim 17, wherein D comprises $\text{CF}_3(\text{CF}_2)_m(\text{CH}_2\text{CH}_{20})_q-$, wherein m is from one to 20 and q is from one to ten.

20 24. The particle of claim 17, wherein the particle further comprises a therapeutic agent.

25 25. The particle of claim 1, wherein the particle further comprises a therapeutic agent.

26. The particle of claim 1, wherein the particle further comprises a second polymer.

30 27. The particle of claim 26, wherein the second polymer comprises a member selected from the group consisting of polyvinyl alcohols, polyacrylic acids, polymethacrylic acids, poly vinyl sulfonates, carboxymethyl celluloses, hydroxyethyl celluloses, substituted celluloses, polyacrylamides, polyethylene glycols, polyamides, polyureas, polyurethanes,

polyesters, polyethers, polystyrenes, polysaccharides, polylactic acids, polyethylenes, polymethylmethacrylates, polycaprolactones, polyglycolic acids, poly(lactic-co-glycolic) acids, and combinations thereof.

5 28. The particle of claim 26, wherein the particle further comprises a therapeutic agent.

29. The particle of claim 28, wherein the therapeutic agent is bound to the first polymer.

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30. The particle of claim 1, wherein the particle further comprises a polysaccharide.

31. The particle of claim 1, wherein the particle is substantially spherical.

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32. The particle of claim 1, wherein the particle further comprises a coating disposed over the surface region.

33. The particle of claim 32, wherein the coating is bioabsorbable.

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34. The particle of claim 1, wherein the particle comprises from about 0.25 weight percent to about 50 weight percent of the first polymer.

25 35. The particle of claim 1, wherein the particle comprises from about 15 weight percent to about 35 weight percent of the first polymer.

36. The particle of claim 1, wherein the interior region has a density of large pores and the surface region has a density of large pores, and the density of large pores of the interior region is greater than the density of large pores at the surface region.

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37. A composition, comprising:

a plurality of particles, at least some of the plurality of particles having a diameter of from about ten microns to about 3,000 microns, wherein at least some of the particles having a diameter of from about ten microns to about 3,000 microns have an interior region and a surface region, a weight percent of a first polymer in the interior region being less than a weight percent of the first polymer at the surface region; and

5 a carrier fluid, the plurality of particles being in the carrier fluid.

38. The composition of claim 37, wherein the carrier fluid comprises a saline solution.

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39. The composition of claim 37, wherein the carrier fluid comprises a contrast agent.

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40. The composition of claim 37, wherein the plurality of particles has an arithmetic mean diameter of about 3,000 microns or less.

41. The composition of claim 37, wherein the plurality of particles has an arithmetic mean diameter of about ten microns or more.